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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,898	09/25/2003	William J. Masek	LOT920030024US1	5987

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EXAMINER	
MITCHELL, JASON D	

ART UNIT	PAPER NUMBER
2193	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hoffmanwarnick.com

Office Action Summary	Application No.	Applicant(s)	
	10/670,898	MASEK ET AL.	
	Examiner	Art Unit	
	JASON MITCHELL	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-18 and 20-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-18 and 20-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to an amendment filed on 8/13/09.

Claims 1-9, 11-18 and 20-26 are pending in this application.

Response to Arguments

Applicant's amendment to claims 11 and 20 are sufficient to overcome the previous 35 USC 112 rejections of those claims, which are consequently withdrawn.

Applicant's arguments filed 8/13/09 regarding the prior art rejections have been fully considered but they are not persuasive.

In the first par. on pg. 8, the applicants state:

> … Applicants assert that the cited references fail to teach or suggest, inter alia, "... each of the plurality of instances of the test application run within a single process, without requiring multiple processes to instantiate the plurality of instances within". In support of the rejection, the Office cites col. 21, lines 53 - 57 in Duggan which provides "... [a] basic module 12 is also responsible for initiating multiple, concurrent sessions... [e]ach session is executed as a separate thread". To this extent, Duggan teaches execution of each thread in a separate session. However, elsewhere, Duggan teaches a Visual Basic Form that contains multiple instances of a custom control for allocating a resource, one instance of which is used for each session. Col. 22, lines 45-63. As such, Duggan requires multiple sessions each requiring a separate instance of a custom control from a form, thus requiring multiple processes. Thus, Duggan fails to teach or suggest that its concurrent sessions run without requiring multiple processes to instantiate the plurality of instances within. Claims 9 and 18 include similar features. Firth fails to cure this deficiency. Accordingly, Applicants respectfully request that the Office withdraw its rejection.

The examiner respectfully disagrees. The applicants appear to incorrectly assert that Duggan's "sessions" are synonymous with the claimed "process". At col. 5, line 66-col. 6, line 3 Duggan provides the following definition of a "session".

> A "session" refers to the execution of one test script, on one client connection, one time. In accordance with the present invention, the test tool program executes multiple, concurrent sessions, each session representing one virtual user of the application program.

From this it should be clear that Duggan's "sessions" are in fact analogous to the claimed "plurality of instances of the test application". In the citation relied upon for the rejection (i.e. col. 21, lines 53-57 'The basic module 12 is also responsible for initiating multiple, concurrent sessions'), it is Duggan's "basic module 12" which is asserted to be analogous to the claimed process. This understanding is in line with the art recognized meaning of the term. For example see the Microsoft Computer Dictionary 5th edition on pg. 423:

> **process**[1] *n.* A program or part of a program; a coherent sequence of steps undertaken by a program.

Duggan col. 22, lines 46-63 similarly anticipates the claimed limitation. Specifically, the disclosed "Visual Basic Form" constitutes the claimed "process" and the 'multiple instances of a custom control' are mapped to, at least aspects of, the claimed "plurality of instances of the test application".

Additionally, for the sake of completeness, it is noted that the phrase cited by the applicant (i.e. col. 21, lines 53 - 57 "[e]ach session is executed as a separate thread") appears to be interpreted by the applicants as indicating each session contains a

thread. However this statement would more properly be understood to indicate the thread as the containing object.

In the par. bridging pp. 8 & 9, the applicants state:

> … the cited references also fail to teach or suggest, inter alia, "... identifying application protocol interfaces (APIs) ..., prior to the instantiating step... [and] providing a test script capable of invoking the APIs ...". Claim 1. The Office admits that Duggan does not explicitly disclose that its command module is implemented as APIs. Rather, the Office cites a passage of Firth that teaches, generically, that APIs exist, reciting "functions in the Internet API reside in a dynamic link library (DLL)." Col. 2, lines 63-67. To this extent, the Office attempts to replace whole pages of Duggan that describe the formation of scripts with one generic sentence describing where an API is stored. Applicants respectfully submit that the reference to an API in Firth has nothing to do with creating testing of application programs, as in Duggan, and any attempt to incorporate this generic API into the Duggan Visual Basic GUI based system of Duggan would, at best, lead to undue experimentation and yield unpredictable results. Accordingly, Applicants request that the Office withdraw the rejection of claim 1.

The examiner respectfully disagrees. APIs (and DLLs) are common tools frequently used in the development of software, and rather than "replacing whole pages of Duggan" the proposed combination simply requires that Duggan's algorithms be implemented as an API (adhering to the well known DLL format). Further, implementing Duggan's algorithms as an API would require only an ordinary level of skill in the art, and while doing so would of course require some testing and debugging this in no way constitutes undue experimentation nor would such an implementation (once debugged) produce any unpredictable results.

In the par. bridging pp. 9 and 10 the applicants state:

> … While Lindholm discloses a generic Java TM Virtual Machine, it does not disclose the instantiation of multiple instantiated threads within a single process for use in testing a server application. Applicants respectfully submit that a person of ordinary skill applying Lindholm in combination with Dugan will not be able to achieve the results of the claimed invention without undue experimentation, at best. The Office's proposed combination of Dugan and Lindholm would lead to unpredictable results. As such, the combined teachings of Dugan, Firth and Lindholm do not support the Office's assertion of a prima facie obviousness. Accordingly, Applicants respectfully request that the Office withdraw its rejection.

The examiner respectfully disagrees. Similarly to the argument directly above, the Java Virtual Machine is a very well known execution environment and writing the software described in Duggan for the JVM would require no more than ordinary skill in the art of software development.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7-9, 11-14, 16-18, 20-23 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,002,871 to Duggan et al. (Duggan) in view of US 5,987,517 to Firth et al. (Firth).

Regarding Claims 1, 9 and 18: Duggan discloses:

providing a test application that satisfies reentrancy requirements *(col. 21, lines 57-61 'Each session is … reentrant')* on a client *(col. 5, lines 18-21 'the test tool … runs on a single computer')*;

identifying command modules associated with the test application *(col. 12, lines 21-23 "A list box 272 contains a list of all of the commands in the command module created for testing a given application program", the command module is inherently identified to the list box in order for the list box to present all of the commands from that module; col. 14, lines 22-28 "the command module is implemented as a Visual Basic 5.0 code module, Each command of the command module comprises a Visual Basic subroutine that contains the instructions for the execution segment of the command")*;

providing a test script capable of invoking the command modules *(col. 13, lines 59-62 "a test operator [can] create test scripts containing … command module commands")*; and

instantiating a plurality of instances of the test application using threads *(col. 21, lines 57-61 'Each session is executed as a separate thread')*, wherein the instantiating and execution of each of the plurality of instances of the test application occur within a single process, without requiring multiple processes to instantiate the plurality of instances within *(col. 21, lines 53-57 'The basic module 12 is also responsible for initiating multiple, concurrent sessions'; col. 21, lines 57-61 "It is the multi-threaded, reentrant nature of the test tool program code"; note that only one process (i.e. the "basic module 12" is required for multiple instances of the test application (i.e. the plurality of sessions")*.

Duggan does not explicitly disclose the command module implemented as APIs.

Firth teaches the use of APIs *(col. 2, lines 63-67 "functions in the Internet API reside in a dynamic link library (DLL)*").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Duggan's command module *(col. 14, lines 22-28 "the command module is implemented as a Visual Basic 5.0 code module)* as an API and to provide a data entry field in the GUI to identify particular API's for use with the application under test. Those of ordinary skill in the art would have been motivated to do so because Firth's APIs "eliminate the need to embed source code directly in an application program to manage Internet application protocols" *(col. 2, lines 64-67; also see Duggan col. 16, lines 9-15 "each command simulates a real user's interaction ... by generating ... an HTTP request")* and thus provide further abstraction for Duggan's test script development *(see e.g. col. 13, lines 59-67 "No knowledge of the underlying programmed instruction of the command module is needed by a test operator"; col. 14, lines 2-4 "The command module is rewritten and/or customized for each different application program to be tested")*.

Regarding Claim 2: The rejection of claim 1 is incorporated; further Duggan discloses; and

upon execution, the test script instantiates the plurality of instances of the test application *(col. 5, line 67-col. 6, line 3 'the test tool program executes multiple concurrent sessions')* using threads *(col. 21, lines 57-61 'Each session is executed as a separate thread')* within the single process *(col. 21, lines 53-57 'The basic module 12 is also responsible for initiating multiple, concurrent sessions'; col. 21, lines 57 "It is the multi-threaded, reentrant nature of the test tool program code")*.

Regarding Claims 3, 14 and 23: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses the server application is a network application *(col. 5, lines 9-12 'a test tool for testing application programs … over a network')*.

Regarding Claims 4, 12 and 21: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses the reentrancy requirements dictates that the plurality of instances of the test application be run within the single process without interfering with each other *(col. 21, lines 57-61 'reentrant nature of the test tool')*.

Regarding Claims 5, 13 and 22: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses each of the plurality of instances of the test application corresponds to a separate thread *(col. 21, lines 57-61 'Each session is executed as a separate thread')*, and wherein each of the separate threads is associated with a different connection to the server *(col. 5, line 66-col. 6, line 3 'A "session" refers to the execution of one test script, on one client connection')*.

Regarding Claims 7, 16 and 25: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses the plurality of instances of the test application simulate use of the server application by a plurality of users *(col. 6, lines 47-51 'the test tool program … is capable of executing test scripts … based on a user list')*.

Regarding Claims 8, 17 and 26: The method of claim 1, 9 and 18 further comprising collecting data corresponding to the test *(col. 8, lines 4-6 'The test tool program … provides four options for logging information')*.

Regarding Claims 11 and 20: The rejection of claims 9, and 18 are incorporated respectively, further; Duggan discloses, and wherein upon execution, the test script instantiates the plurality of instances of the test application *(col. 5, line 67-col. 6, line 3 'the test tool program executes multiple concurrent sessions')* using threads *(col. 21, lines 57-61 'Each session is executed as a separate thread')* within the single process *(col. 21, lines 53-57 'The basic module 12 is also responsible for initiating multiple, concurrent sessions')*.

Claims 6, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,002,871 to Duggan et al. (Duggan) in view of US 5,987,517 to Firth et al. (Firth) in view of "The Java™ Virtual Machine Specification" by Lindholm et al (Lindholm).

Regarding Claims 6, 15 and 24: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan does not disclose the process comprises a JAVA virtual machine.

Lindholm teaches that JAVA programs, which run on a JAVA virtual machine were well known at the time of the invention, and that JAVA programs and the JVM provided benefits known to those of ordinary skill in the art.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to implement Duggan's 'test tool' and 'basic module' in the JAVA programming language and execute them on a JVM.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). The examiner notes that the rejection heading for claims 6, 15 and 24 has been changed to include reference to Firth. However, this is not felt to constitute a change in rejection requiring issuance of a non-final rejection. Instead the omission in the previous action merely constitutes a clerical error and the rejection explicitly incorporated the rejection of claims 1, 9 and 18. Accordingly, it is felt that no lack of clarity in the examiner's position resulted.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON MITCHELL whose telephone number is (571)272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bullock Lewis can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/
Primary Examiner, Art Unit 2193